Fig. 1 (Prior Art)

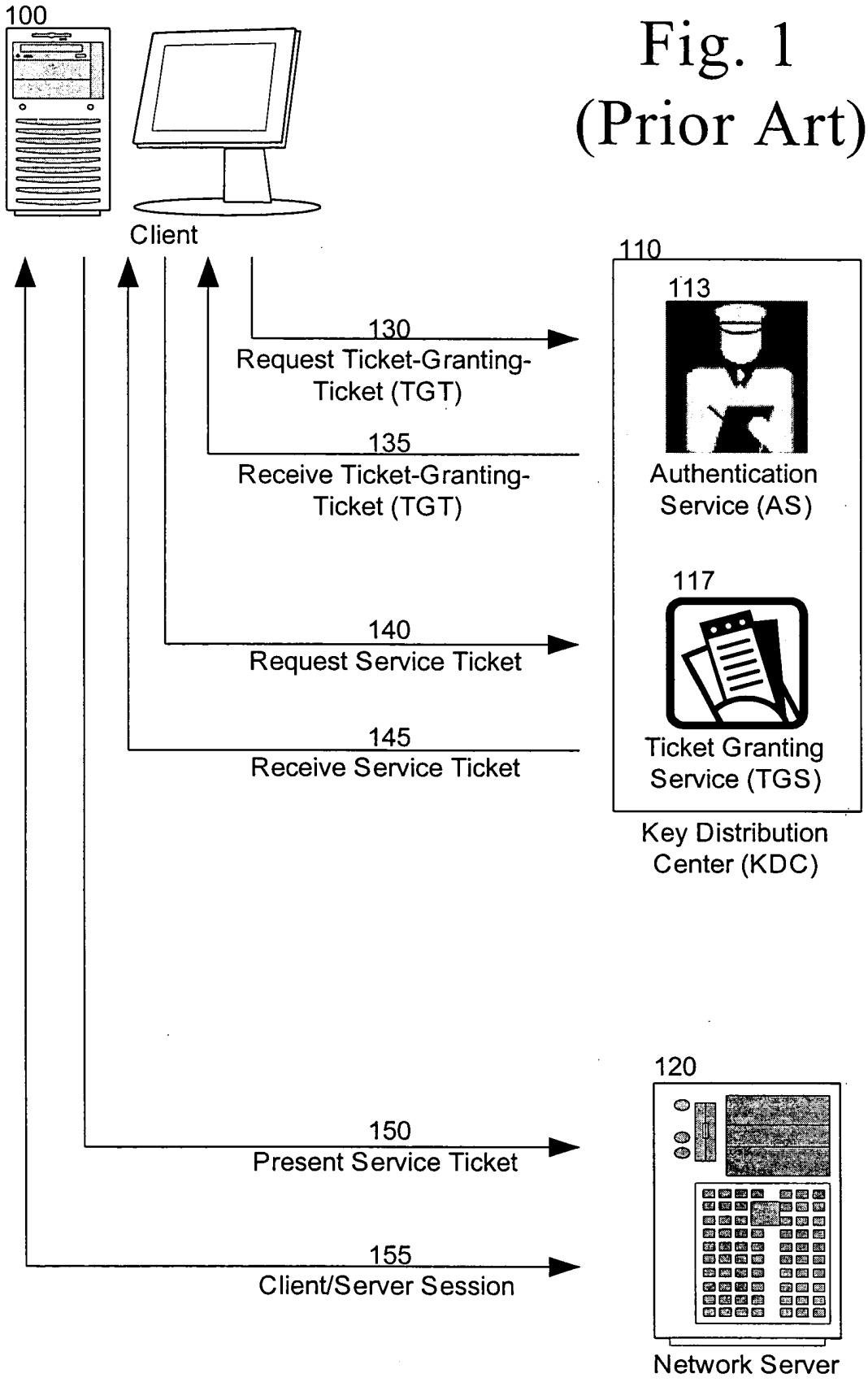


Fig. 2

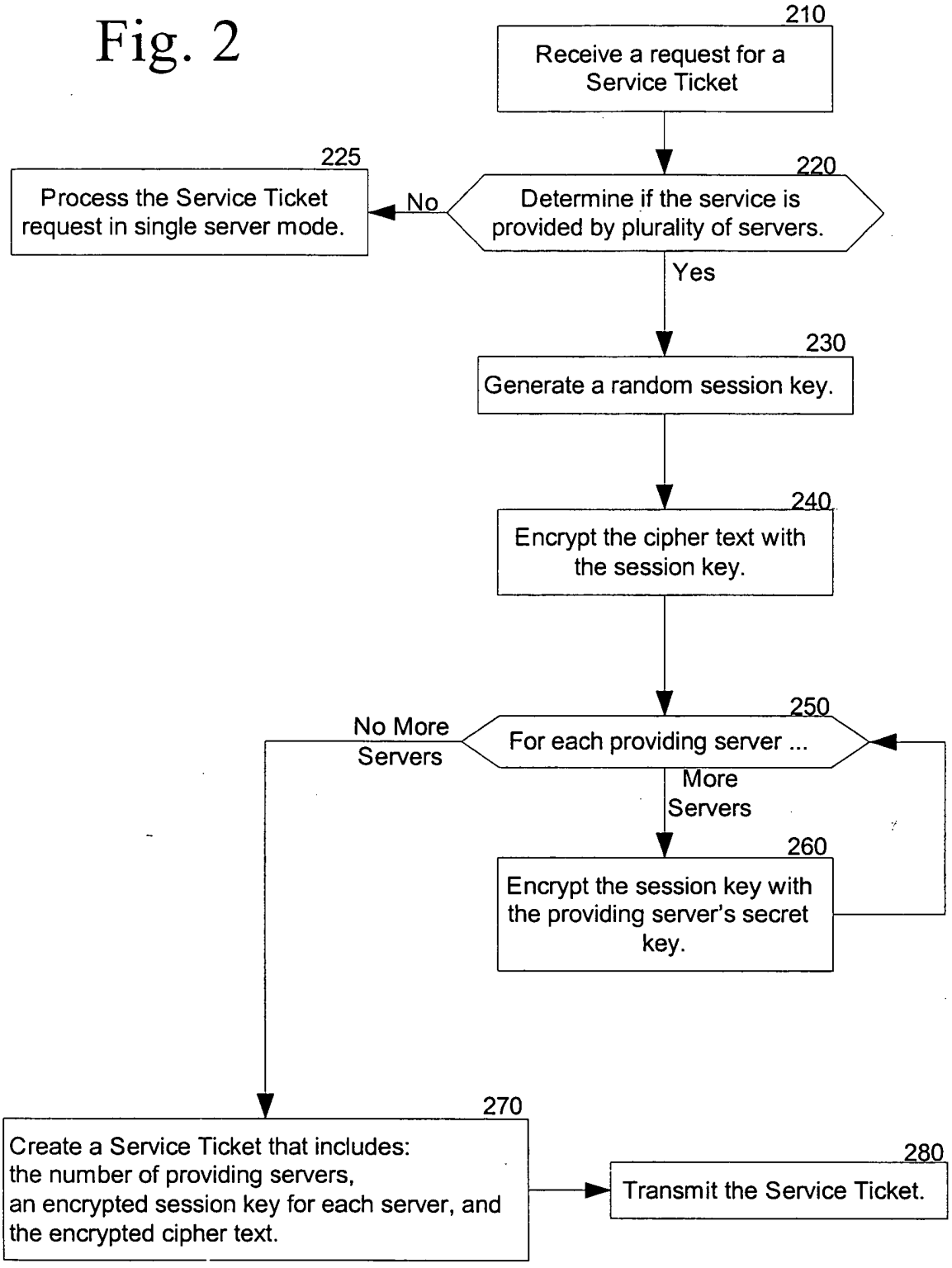

210
Receive a request for a Service Ticket
220
Determine if the service is provided by plurality of servers.
No
225
Process the Service Ticket request in single server mode.
Yes
230
Generate a random session key.
240
Encrypt the cipher text with the session key.
250
For each providing server ...
No More Servers
More Servers
260
Encrypt the session key with the providing server's secret key.
270
Create a Service Ticket that includes:
the number of providing servers,
an encrypted session key for each server, and
the encrypted cipher text.
280
Transmit the Service Ticket.

Fig. 3

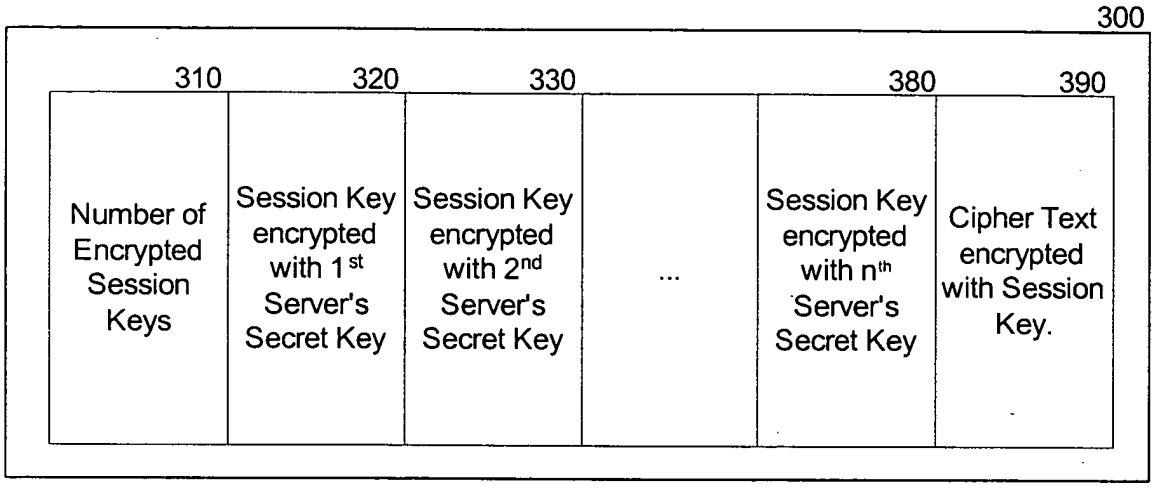

300
310
320
330
380
390
Number of Encrypted Session Keys
Session Key encrypted with 1st Server's Secret Key
Session Key encrypted with 2nd Server's Secret Key
...
Session Key encrypted with nth Server's Secret Key
Cipher Text encrypted with Session Key.

Fig. 4

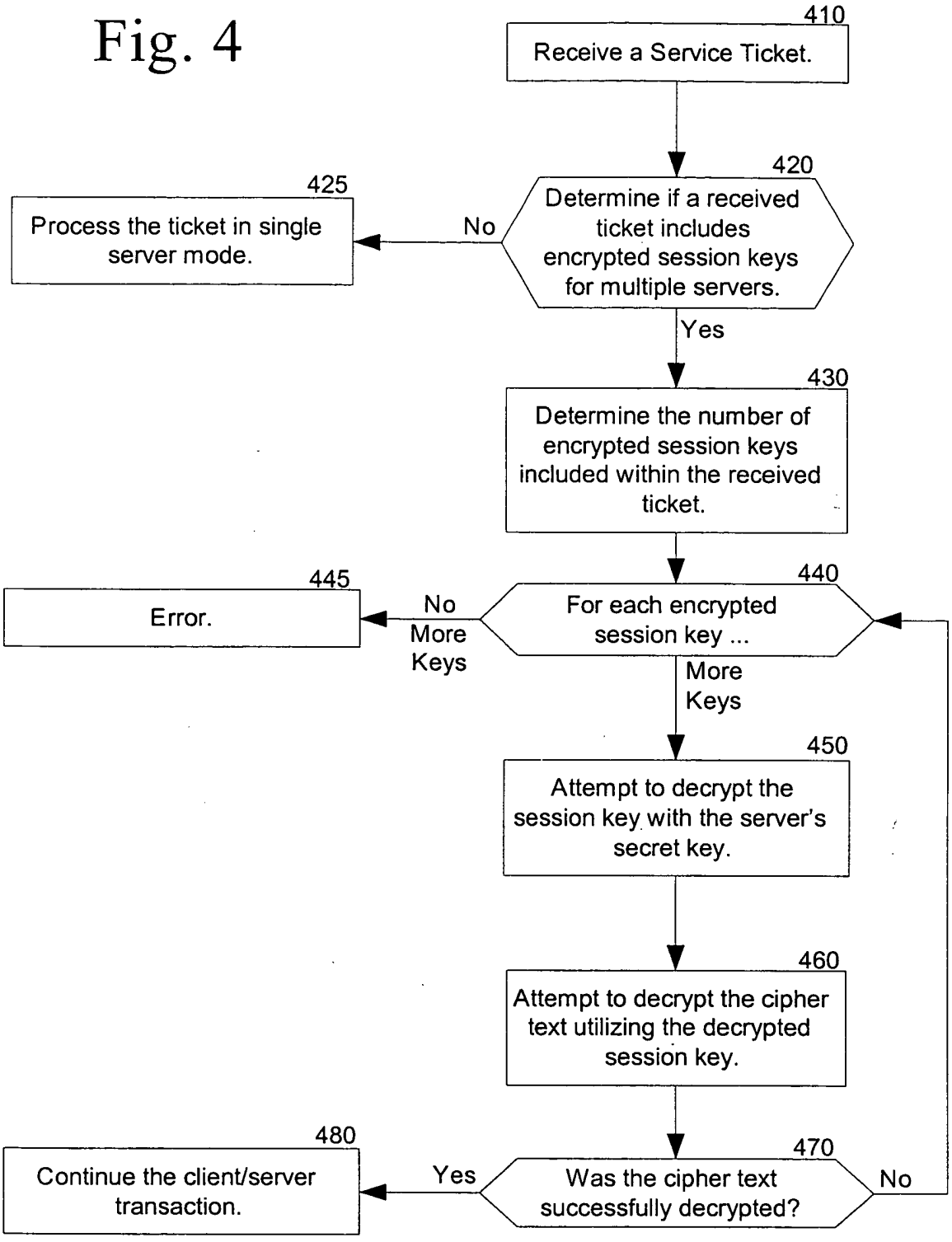
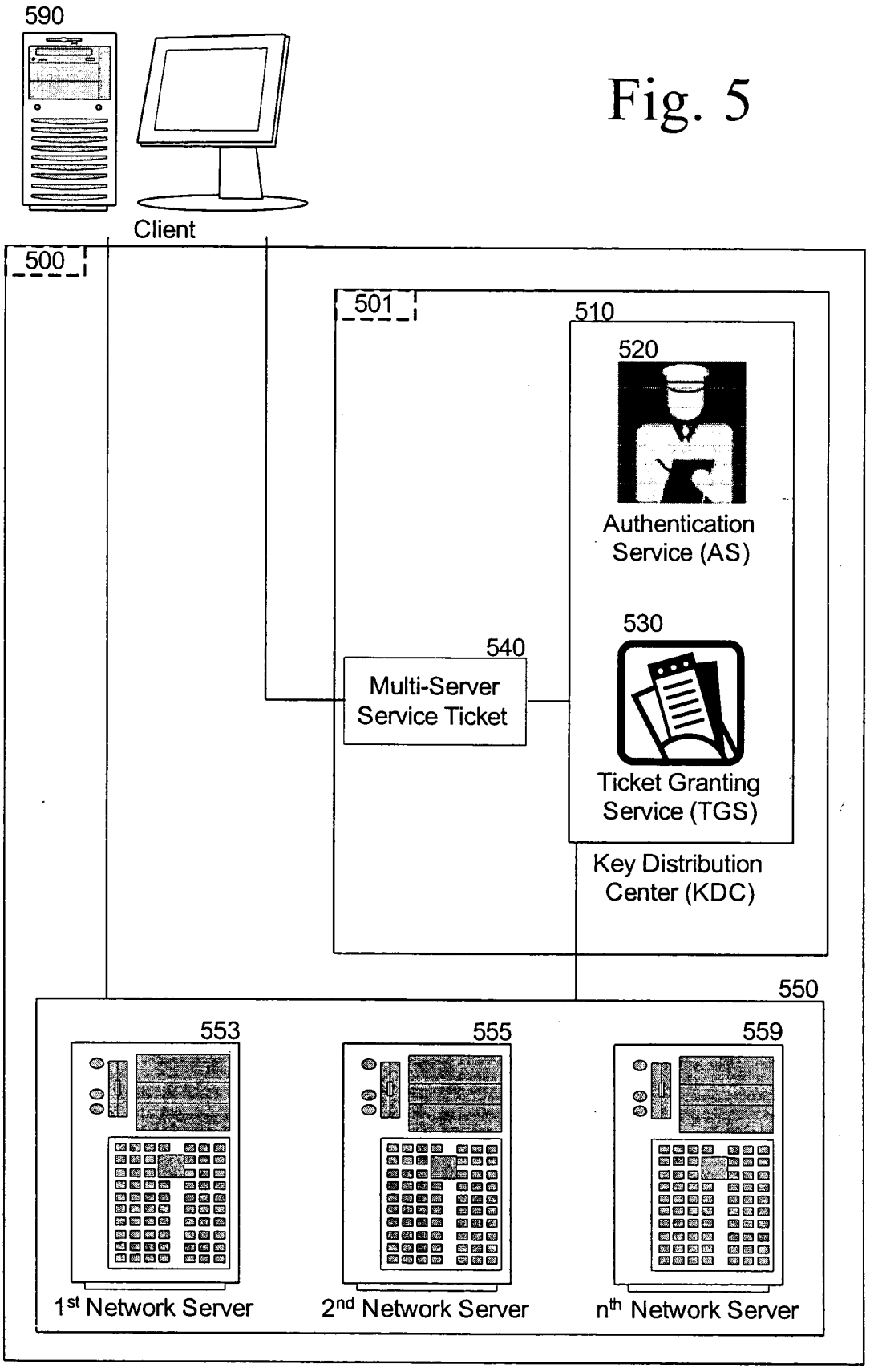

410
Receive a Service Ticket.
420
Determine if a received ticket includes encrypted session keys for multiple servers.
No
425
Process the ticket in single server mode.
Yes
430
Determine the number of encrypted session keys included within the received ticket.
440
For each encrypted session key ...
No More Keys
445
Error.
More Keys
450
Attempt to decrypt the session key with the server's secret key.
460
Attempt to decrypt the cipher text utilizing the decrypted session key.
470
Was the cipher text successfully decrypted?
Yes
480
Continue the client/server transaction.
No

Fig. 5


590
Client
500
501
510
520
Authentication Service (AS)
530
540
Multi-Server Service Ticket
Ticket Granting Service (TGS)
Key Distribution Center (KDC)
550
553
555
559
1st Network Server
2nd Network Server
nth Network Server